

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions or listings of claims in this application.

1. (Currently Amended) A water-soluble or water-dispersible polyurethane comprising the reaction product of

A) at least one polyether polyol a1) having a average functionality of ≥ 3 and at least one urethane group-containing polyether polyol a2) having an average functionality of ≥ 4 ,

B) at least one C₆-C₂₂ monoalcohol,

C) at least one (cyclo)aliphatic and/or aromatic diisocyanate,

D) optionally at least one C₄-C₁₈ monoisocyanate, and

E) optionally at least one polyisocyanate having an average functionality of > 2 ,

wherein component C) comprises isophorone diisocyanate and the starting NCO/OH equivalent ratio is between 0.5:1 to 1.2:1 and the polyurethane has a softening point of from 10°C to 80°C, and

wherein the production of the polyether alcohol mixture A) containing polyethers a1) and urethane group-containing polyethers a2) is carried out by the partial reaction of polyethers a1) with at least one organic isocyanate having a functionality of ≥ 2 and up to about 10 mole % to 50 mole % the polyethers a1) are reacted with isocyanates.

2. (Previously Presented) The polyurethane of Claim 1, wherein the polyether polyol a 1) has an average functionality of 3 or 4.

3. (Previously Presented) The polyurethane of Claim 1, wherein the polyether polyol a1) has an average functionality of 4 to 6.

4. (Previously Presented) The polyurethane of Claim 1, wherein the component B) comprises a C₈-C₁₈ monoalcohol.

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5. (Previously Presented) The polyurethane of Claim 1, wherein component C) comprises a (cyclo)aliphatic diisocyanate.

6. (Previously Presented) The polyurethane of Claim 1, wherein component D) comprises a C₈-C₁₄ monoisocyanate.

7. (Cancelled)

8. (Previously Presented) The polyurethane of Claim 1, wherein the urethane group-containing polyether polyol a2) is produced by a partial reaction of polyether polyol a1) with a diisocyanate.

9. (Previously Presented) The polyurethane of Claim 8, wherein the urethane group-containing polyether polyol a2) is produced by a partial reaction of polyether polyol a1) with a polyisocyanate having an average functionality of ≥ 2 .

10. (Currently Amended) A process for the production of ~~the a~~ water-soluble or water-dispersible polyurethane of Claim 1, comprising reacting

A) a mixture of at least one polyether polyol a 1) having an average functionality of ≥ 3 and at least 1 urethane group-containing polyether polyol a2) having an average functionality of ≥ 4 ,

B) at least one C₆-C₂₂ monoalcohol, at least one (cyclo)aliphatic and/or aromatic diisocyanate,

C) at least one (cyclo)aliphatic and/or aromatic diisocyanate,

D) optionally at least one C₄-C₁₈ monoisocyanate, and

E) optionally at least one polyisocyanate having an average functionality of > 2

at a starting NCO/OH equivalent ratio of 0.5:1 to 1.2:1, component C) comprises isophorone diisocyanate, and the polyurethane has a softening point of from 10°C to 80°C

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wherein the production of the polyether alcohol mixture A) containing polyethers a1) and urethane group-containing polyethers a2) is carried out by the partial reaction of polyethers a1) with at least one organic isocyanate having a functionality of ≥ 2 and about 10 mole % to 50 mole % the polyethers a1) are reacted with isocyanates.

11. (Previously Presented) In a process for adjusting the flow properties of an aqueous paint system, adhesive and another aqueous formulation, the improvement comprising adding the polyurethane of Claim 1 thereto.

12. (Previously Presented) An aqueous paint system, adhesive and another aqueous formulation comprising the polyurethane of Claim 1.